



Hurricane Damage Evaluation Manual

Preliminary Draft

By

Paul D. Colman, P.E.
Branch Manager
Jackson, MS

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PAUL D. COLMAN, P.E.
BRANCH MANAGER

Mr. Colman graduated from the University of Alabama Birmingham with a Bachelor of Science Degree in Civil Engineering. His expertise as a project manager and engineer developed over his 20+ year career with various construction firms. He is registered as a Professional Engineer in Mississippi, Alabama and Florida. Mr. Colman has progressive construction management experience with various commercial, industrial, institutional and civil projects. Mr. Colman has been responsible for managing all aspects of construction including technical direction, coordination of design and construction activities. His duties included contract negotiation to define the scope of work to be performed, develop qualification proposals and presentations. He has established budgets estimates, produced and maintained design and construction CPM schedules, reviewed and certified shop drawings and product data for compliance with specifications. He has provided technical assistance, supervised job site activities and ensured enforcement of quality and safety procedures.

EDUCATION AND PROFESSIONAL ASSOCIATIONS

BS in Civil Engineering, University of Alabama, Birmingham 1986-1989
Member of American Society of Civil Engineers
Technicians Diploma in Civil Engineering, 1976
Registered Professional Engineer – Alabama, Mississippi and Florida

EMPLOYMENT HISTORY

2004 – Present	Rimkus Consulting Group, Inc.
1998 to 2004	Roy Anderson Corp., Jackson, Mississippi
1995 to 1998	Malouf Construction Corp., Madison, Mississippi
1994 to 1995	Roxco, Ltd. Brandon, Mississippi
1989 to 1994	Harbert and Bill Harbert Construction, Birmingham, Alabama
1986 to Oct 86	Perry Hand and Associates, Pelham, Alabama
1982 to 1985	Concor Construction, Johannesburg, South Africa
1979 to 1982	Basil Read Inc., Malawi and South Africa
1974 to 1979	Ministry of Water Development, Zimbabwe

CONTINUING EDUCATION COURSES AND RELATED TRAINING:

Quality Control for Contractors – US Corps of Engineers 2003
Post Tension Cable Design for House Slabs – ASCE 2003
OSHA 10 hour Construction Safety and Health Training (1997)
Sudden Damage vs. Maintenance Problems in Buildings
Composition and Wood Roofs - Damage Assessment
Commercial Roofs - Damage Assessment
Mechanical Damage to Roofs
Hail, Wind and Mechanical Damage to Vehicles
Construction Defect Training

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HOUSTON DALLAS/FT. WORTH AUSTIN SAN ANTONIO CORPUS CHRISTI MC ALLEN NEW ORLEANS
LAFAYETTE ATLANTA CHICAGO LAS VEGAS PHOENIX TAMPA ORLANDO FT. LAUDERDALE JACKSONVILLE
DENVER BALTIMORE JACKSON CHARLOTTE LOS ANGELES ZURICH MADRID KUWAIT CITY NEW YORK

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Hurricane Basics

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Photos

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Hurricane Damage Inspections

Evaluating Wind vs. Water

In hurricane situations, wind or water or both may cause damage. Determining the cause of the damage is critical in the claim settlement. Specific information about the storm will be very helpful in making this determination.

Knowing the power of wind compared to the power of water can help in assessing damages. Wind is less destructive than a storm surge. For example, wind at 40 mph produces 7 pounds of pressure per square foot (psf) compared to a wave at 7mph produces 200 pounds of pressure per square foot (psf). There is zero wind velocity at the ground level therefore, wind forces increase exponentially with height above the ground. Winds passing over and around a building can develop negative or "pulling" pressure in addition to the "pushing" pressure. The average wooden roof is designed to sustain 30 psf, which means 80 mph winds are needed to cause considerable damage.

Storm surge is the combination of wind and low atmospheric pressure. It can range from 3-4 feet to 15 -20 feet. Keep in mind 1 inch of falling barometric pressure is going to raise the water level about 1 foot. Although it is hard to imagine how strong water can be, remember a cubic yard of water (3ft x 3ft x 3ft) weighs over $\frac{3}{4}$ ton. A breaking wave is so deadly because of this intense power. A modest 4-foot wave striking an 8-10 foot wall could destroy it. Obviously, this is the reason building codes require structures to be built above the wave height which is the best way to mitigate a loss.

Wind speeds and storm surge is not the only thing to be concerned about when it comes to hurricanes. In the last 30 years, more people have died from inland flooding than from tidal surges. Intense rainfall is not related to wind speed. The greatest rainfall amounts often occur from weaker storms that drift slowly or stall over an area. Last year, Hurricane Floyd brought intense rains and record flooding. Of the 56 lives lost during this storm, 50 drowned due to inland flooding. Machinery, heavy equipment and vehicles often sustain significant damage from flooding.

Wind & Water Investigation Tips

Research local newspapers and/or check with the local weather service, the U.S. Weather Bureau or other agencies to determine the specific data relative to the storm. Information may also be obtained from the Federal Emergency Management Agency meteorologist at telephone (202) 566-1600, extension 3071.

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(When damage was caused by a hurricane) Record:

- Highest wind speed
- Barometric pressure and storm surge
- Amount of rainfall
- Tidal heights
- Wave heights
- Check and record the timing and duration for each.
- Record the distance and direction of the insured risk relative to the eye of the storm.
- Remember that the waves are higher to the right of the storm's path.

Research and record site conditions:

- Original ground elevation
- Distance from body of water
- After-storm ground elevation or other indications of scour
- Amount and type of storm debris.
- Canvas the neighborhood for eyewitnesses and take their recorded or signed statements.
- Measure and record how many feet the debris line is from the shoreline.
- Describe the topography in detail.

Determine and record a complete description of the damaged or demolished building, including the type of construction, whether elevated (if elevated with an enclosure, be sure to indicate the type of enclosure - breakaway wall, open lattice work, etc.), number of floors (including basement), roof covering and pitch, windows, carports, etc., and the building's relative position to the wind. Also include a description of the foundation type (i.e., piles, piers, etc.) and damage.

Photograph (close-up) the remains of connectors or tie downs. Describe the size, type, and method of installation.

Document where evidence suggests the insured risk was not built as securely as neighboring buildings.

Check local building codes to determine if a building violation has occurred.

Document the age of the building and the effective dates of the building codes.

Check for and photograph:

Debris line.

Houses and objects adjacent to the insured risk.

If damage appears to be different from that of the insured risk, determine why and record it in the claim files.

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Wind-caused openings in the building.

Missing roof shingles.

Watermarks on both the exterior and interior walls and ceilings of the building, and on nearby trees or fence posts.

Uprooted trees or trees snapped off at a high level.

Severe erosion (water) such as leaning pilings or houses "nosed down" in the ground.

Remember (wind) leaning or bent pilings can also occur when a building is pushed over by the wind forces or blown off the pilings.

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Wave Effects Formulas

Wind vs. Wave

Density of Water = 62.4#/cf

Density of Air = [1.3 oz/cf] / [16oz/#] = 0.08125 #/cf

Density Comparison:

Density of Water/Density of Air = (62.4) / (0.08125) = 768

Water is 768 times denser than air

Pressure of Wind vs. Wave

Pressure = $\frac{1}{2} m V^2$

Where:

M= mass = w/g

W = weight

G = acceleration due to gravity

V = velocity

Pressure Induced (Kinetic Energy) by Wind (1sf) Traveling at 100 mph:

$$P = \frac{1}{2} \times [(0.08125 \text{ #/ft}^3) / (32.2 \text{ ft/sec}^2) \times \\ [(100 \text{ miles/hr}) (5280 \text{ ft/mile}) (1 \text{ hr/60 min}) (1 \text{ min/60 sec})]^2] \\ P = \frac{1}{2} \times [0.002523 \text{ # sec}^2/\text{ft}^4] \times [146.67 \text{ ft}^2/\text{sec}^2]^2 \\ P = 27.14 \text{ #/ft}^2$$

WIND

Pressure Induced (kinetic Energy) by Wave (1sf) Traveling at 10 mph:

$$P = \frac{1}{2} \times [(62.4 \text{ #/ft}^3) / (32.2 \text{ ft/sec}^2) \times \\ [(10 \text{ miles/hr}) (5280 \text{ ft/mile}) (1 \text{ hr/60 min}) (1 \text{ min/60 sec})]^2] \\ P = \frac{1}{2} \times [1.9379 \text{ # sec}^2/\text{ft}^4] \times [4.67 \text{ ft}^2/\text{sec}^2]^2 \\ P = 209 \text{ #/ft}^2$$

WAVE

Determine the Wind Velocity Required to Produce an Equal Pressure to that Generated by a Wave Traveling at 10mph:

$$P = 209 \text{ #/ft}^2 = \frac{1}{2} \times [(0.08125 \text{ #/ft}^3) / (32.2 \text{ ft/sec}^2)] \times V^2 \\ V^2 = [(209 \text{ #/ft}^2) \times (2) \times (32.2 \text{ ft/sec}^2)] / (0.08125 \text{ #/ft}^3) \\ V = \sqrt{(165,656 \text{ ft}^2/\text{sec}^2)} = 407 \text{ ft/sec} \\ V = 407 \text{ ft/sec} (1 \text{ mile/5280 ft}) (60 \text{ sec/min}) (60 \text{ min/hr}) \\ V = 277.5 \text{ mph} \quad \text{[Equivalent Wind to Wave]}$$

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Ins. Co.:		Job No.:	
Adj. Co.:		By:	
Insured:		Date:	

Interviewee: _____

House Faces: N S E W

Type of Building: 1-Story 2-Story Other: _____

CMU- _____ or Wood-Framed _____

Exterior Finish: Stucco ___ Paint___ Vinyl Siding___ Wood Siding___
Cut Stone___ Brick ___

Interior Finish: Drywall/Paint___ Drywall/Wallpaper___ Plaster___
Wood Panel___ Other___

Last Painted: Interior _____ Exterior _____

Roof: Concrete/Clay Tile Composite/Wood Shingle Roll Roofing

Floor: Slab-on-grade Wood -framed

Floor Finish: Carpet _____ Linoleum _____ Tile _____ Hardwood ___
Terrazzo _____

Built: _____

Bought: _____

Additions: Yr. () _____

Extra Features: Yr. () _____

Water: Municipal Groundwater Well/ Irrigation Well

Sewer: Municipal Septic w/ Drain field

Are water bills consistent? Y / N

Plumbing Leaks: Y / N _____

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Problems Began: _____

Doors Binding: Y / N _____

Floor Slab Cracks: Y / N _____

Adjacent Structures Damaged: Y / N _____

Footings/Foundations: _____

Interior Damages

Living Room	
Family Room	
Den/Office	
Master Bedroom	
Bedroom 1	
Bedroom 2	
Master Bath	
Bath 1	
Bath 2	
Kitchen	
Dining Room	
Pool	
Garage	
Laundry Room	

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Notes:

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Standard Report Format

1st paragraph – 1st sentence - what the insured reported. 2nd sentence - the address of the property

2nd paragraph –

1. Who hired us
2. What the clients wants and any subsequent requests not included on the job sheet such as repairs or cost estimates
3. Who did the inspection - under the supervision of - if not a MS PE
4. Who was present during the inspection
5. References to technical information

Conclusions – three to five conclusions summarized from the analysis. Keep them brief and to the point. The conclusion are based the observation and drawn from the analysis.

These are examples only.

1. The building was destroyed by ... (be specific wind or surge) ...
2. We cannot rule out the possibility that high winds caused to damage the non-structural components prior to the destruction by storm surge.

Introduction – Use the Katrina boiler plate but modify to suite the particular location i.e. inland reports do not need surge information but maybe more info on rainfall etc. Make sure the information is correct.

Observations

1st paragraph – descriptions of the building i.e. number of stories, foundation, exterior wall and roof coverings and the direction the building faces.

2nd paragraph – Include all the Information that was reported to you by the insured, adjuster or anyone else (use names not "insured" or "owner" or "neighbor"). This includes age and length of ownership and reported information or details. List them in chronological order.

During the course of our site visit, we observed the following:

Description of you observations either bulleted, which I prefer, or in paragraphs form "Our examination of the exterior revealed . . ."

DO NOT SAY something was damaged "due to wind" as that is analysis"

SUPPORT YOUR OBSERVATION WITH PHOTOGRAPHS. Observations do not support the photos.

Reference the photos to the observations but do not reference them in you conclusions or analysis.

Use sub-headings for multiple buildings.

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Analysis

Analyze your observations.

Include references to storm and wind information for the property area.

EXAMPLE: Weather data showed that wind speeds in the Gulfport region were approximately 100 to 130 mph, and that a storm surge of 11 to 30 feet occurred. Since the wind forces from Hurricane Katrina were estimated in the range of 130 mph, we cannot rule out that lateral forces from wind loads exceeded the as-built wind resistant strength of the non-structural building components however the lateral pressure of wave action typically exceeds wind loads. A 130 mph wind will produce a lateral pressure of 43 psf whereas a 10-foot height of water will produce a maximum hydrostatic pressure of over 600 psf, not including dynamic lateral forces from wave action.

The conditions stated above support the conclusion that the storm surge destroyed the building. Debris lines, scraped marks measured on trees, walls etc. indicated that the storm surge was ??? feet above the first floor level.

Do not make assumption or speculate.

DO NOT PUT OBSERVATIONS IN YOUR ANALYSIS.

Final paragraph

This report was prepared for the exclusive use of Click and type and was not intended for any other purpose. Our report was based on information made available to us at the time. Should additional information become available, we reserve the right to determine the impact, if any, the new information may have on our opinions and conclusions and to revise our opinions and conclusions if necessary and warranted. Photographs taken during our work are retained in our files and are available to you upon request. This report was prepared for our client's use, and we disavow any liability for use by others.

Photographs

Photographs are included in the report.

Limit the number of photos to 8 per building.

Do not include (repeat) different views of the same area.

Write the descriptions in complete sentences and describe what is relevant in the photo.

Limit the pixels in the camera and/or compress the photos in the report so the report size is reduced and can be emailed.

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Rimkus Consulting Group, Inc.
198 Charmant Drive, Suite 4
Ridgeland, Mississippi 39157
(601) 898-4738 Telephone
(601) 853-8303 Facsimile

Certificate of Authorization No. E-1307

Date

Click and type

Re: Type of Property
Claim No: Click and type
Insured: Click and type
Subject: Report of Findings
RCG File No: 522Click and type

Dear Click and type:

Mr. Click and type reported that his residence/building was damaged by Hurricane Katrina on August 29, 2005. The residence/building was located at Click and type.

Rimkus Consulting Group, Inc. was retained by Client Name to evaluate the reported damage to the residence/building. We were specifically asked to determine structural damage caused by the hurricane winds verses structural damage caused by the associated storm surge and waves. Name of engineer performed our visual inspection of the property on Date of Inspection. Mr. Who was present was present during the inspection and furnished information pertaining to the building. Weather data used during our evaluation was obtained from Compu-Weather, Inc. and the National Oceanic and Atmospheric Administration (NOAA).

CONCLUSIONS

The following conclusions were made after our site visit and a review of the field notes and photographs. Our opinions are as follows:

1. Click and type

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INTRODUCTION

Hurricane Katrina was one of the strongest storms to impact the coast of the United States during the last 100 years. After crossing South Florida and entering the Gulf of Mexico Katrina began to strengthen reaching category 5 strength hurricane status and on August 28, 2005, about 250 miles south-

southeast of the mouth of the Mississippi River Katrina's winds reached their peak intensity of 175 mph winds and the pressure fell to 902 mb.

According to weather data published October 2005 in Technical Report 2005-01, "Hurricane Katrina – A Climatological Perspective" by the National Oceanic and Atmospheric Administration's (NOAA's) National Climatic Data Center, sustained winds as high as 140 mph likely occurred on August 29, 2005 at the point of landfall near the Louisiana/Mississippi border. 94 mph sustained winds were reported at the Gulfport Emergency Operations Center, while sustained winds in excess of hurricane force occurred along the entire Mississippi coast and up to 125 miles outward from Katrina's center.

In addition, NOAA-published weather data also indicated that wind gusts measured along the Mississippi coast on August 29, 2005 included a 90 mph gust at Keesler AFB in Biloxi; a 100 mph gust in Gulfport; and a 119 mph gust in Pascagoula.

The storm surge from the hurricane produced wide-spread flooding. Along the Mississippi coast, there were reported storm surges of 11.27 feet at Green Pass, 12.16 feet at Pascagoula, 26 feet at the Biloxi River at Wortham, and a report of 30 feet above sea level in Hancock County.

OBSERVATIONS

The building/residence was a number of stories constructed on a Click and type foundation system. The exterior walls were covered with Click and type and the roof was covered with Click and type. For the purposes of this report, the front of the residence/building was referenced to face direction.

Mr. Click and type reported that the residence was constructed in Click and type and he had owned it since Click and type. He stated include all of the information that was reported to you here

During the course of our site visit, we observed the following:

- write only major observations, job file will contain full observations

ANALYSIS

Weather data showed that wind speeds in the Click and type region were approximately Click and type mph, and that a storm surge between/greater than depth of surge feet occurred. The lateral pressure from wave action typically exceeds wind loads. A Click and type mph wind will produce a lateral pressure of Click and type psf whereas a 10-foot height of water will produce a maximum hydrostatic pressure of over 600 psf, not including dynamic lateral forces from wave action.

Write analysis here and give opinions as to the cause of the damage

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The conditions stated above support the conclusion that Click and type

This report was prepared for the exclusive use of Click and type and was not intended for any other purpose. Our report was based on information made available to us at the time. Should additional information become available, we reserve the right to determine the impact, if any, the new information may have on our opinions and conclusions and to revise our opinions and conclusions if necessary and warranted. Photographs taken during our work are retained in our files and are available to you upon request. This report was prepared for our client's use, and we disavow any liability for use by others.

Thank you for allowing us to provide this service. If you have any questions or need additional assistance, please call.

Sincerely,

RIMKUS CONSULTING GROUP, INC.

Click and type
Consultant

Click and type, P.E.
State Reg. Eng. No. Number
Click and type Consultant

Attachments: Photographs

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Photograph 1

Click and type

Photograph 2

Click and type

Photograph 3

Click and type

Photograph 4

Click and type

Photograph 5

Click and type

Photograph 6

Click and type

Photograph 7

Click and type

Photograph 8

Click and type

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Rimkus Consulting Group, Inc.
198 Charmant Drive, Suite 4
Ridgeland, Mississippi 39157
(601) 898-4738 Telephone
(601) 853-8303 Facsimile
Certificate of Authorization No. E-1307

April 24, 2006

Click and type

Re: Claim No: Click and type
Insured: Click and type
Subject: Supplemental Report
RCG File No: Click and type

Dear Click and type:

Rimkus Consulting Group, Inc. furnished to your office our Report of Findings dated Click and type concerning damage caused by Click and type to the Click and type. Since that time you have requested that we provided additional analysis of our observation and expand on our conclusions.

CONCLUSIONS

The following conclusions are added to our report of findings:

1. *Click and type.*

DISCUSSION

Click and type

ANALYSIS

Our inspections of other wood-framed structures along the Mississippi Gulf Coast revealed buildings damaged by wind that were not damaged by the storm surge and associated wave action. In other instances, damages attributed to surge versus damages attributed to wind were discernable based upon the physical evidence that remained at the particular site. In these cases, portions of the buildings remained on site and partially erect such that an assessment of their specific damages could be performed. Our analysis of the cause and origin of the damage is a product of the physical evidence observed at the site and the surrounding area, engineering principles and weather data.

Click and type

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This report was prepared for the exclusive use of Safeco Insurance Company, and was not intended for any other purpose. Our report was based on information made available to us at the time. Should additional information become available, we reserve the right to determine the impact, if any, the new information may have on our opinions and conclusions and to revise our opinions and conclusions if necessary and warranted. Photographs taken during our work are retained in our files and are available to you upon request. This report was prepared for our client's use, and we disavow any liability for use by others.

Thank you for allowing us to provide this service. If you have any questions or need additional assistance, please call.

Sincerely,

RIMKUS CONSULTING GROUP, INC.

Click and type, P.E.

Click and type

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Rimkus Consulting Group, Inc.

**Hurricane Property Damage Evaluation Protocol
Policy**

1. All Work will be performed under the supervision and direction of a Professional Engineer licensed in the state in which the damaged property is located.
2. The Professional Engineer will be in responsible charge of all technical matters of policy regarding the work performed.
3. The Professional Engineer will engage the assistance of field engineers and other qualified persons to perform field inspections, take photographs, assess extent of damage, research wind velocities and direction, determine floodwater and storm surge depths, analyze damage causations, and prepare a draft of the Report of Findings.
4. All persons assisting in the performance of the work, under the supervision and direction of the Professional Engineer, will be qualified to do so by education and experience. The persons (field engineers) performing the field inspection, assessing damage extent, analyzing damage causation, and drafting the report will be engineers by education and experience, even though not necessarily licensed or licensed in the state where the damaged property is located.
5. The Report of Findings will be reviewed by the Professional Engineer in sufficient depth and detail to fully coordinate and assume responsibility for the report and all conclusions contained therein.
6. The Report of Findings will be signed and sealed by the Professional Engineer in responsible charge of all work performed in inspecting, analyzing, and preparing the Report of Findings.

TECHNICAL REPORT REVIEW

1. The assignment sheet will be reviewed by the Professional Engineer to determine what questions the client wants answered by Rimkus.
2. The location of the subject property will be found using one of the internet based address programs such as Yahoo Maps or Google Maps.
3. The property location will be compared to known or reported storm surge elevations listed in various available resources. The property location will also be compared to known wind velocities listed in various available resources.
4. The report and report photographs will then be reviewed by the Professional Engineer for content, observations, accuracy, reasoning, conclusions and composition to determine if the field engineer has

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addressed what the client wants us to determine and if the observations, discussion and analysis are correct.

5. The Professional Engineer will call the field engineer and discuss the report and findings.
6. In those cases where the report is complete and the Professional Engineer has a very good understanding of what the field engineer has seen at the site and agrees with his conclusions, the report will be sent to be published and the Professional Engineer will sign and seal the report.
7. In those cases where the Professional Engineer has questions that the field engineer will need to clarify, he will call the field engineer and attempt to get the questions clarified over the phone. He may download all the pictures from the file to review or ask the field engineer to send him additional material to review. In some cases the field engineer will be asked to re-write the report to correct some deficiency or to clarify some area of the report. The field engineer will then re-submit the report to the Professional Engineer for further review. The field engineer will repeat this process until the Professional Engineer is comfortable with the areas of concern and the entire report. Sometimes the field engineer will need to contact the client to clarify what they want the report to cover.
8. Field engineers will call the Professional Engineer from the field to discuss unusual conditions they are finding at a particular site. They may email him pictures of specific items or observations to discuss over the phone prior to drafting the report.
9. Any modifications made to the report as written by the field engineer will be discussed with the Professional Engineer prior to publishing the report. Minor modifications such as adding the standard disclaimer, restructuring an awkward sentence, correcting spelling errors or grammar errors, and correction of names and addresses may be made without talking to the field engineer.
10. After all areas of concern have been addressed, the report will be signed and sealed by the Professional Engineer and published.

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RCG Memo

To: All Department & Division Managers
From: Ralph S. Graham
CC: SFC, GWM, CRB
Date: November 4, 2005
Re: Contract Consultants

We are currently using a large number of contract consultants, particularly in regard to storm claims.

In many cases, these are people not registered in the states where we are working, and, hence, are working under the direct supervision of the peer reviewer who is registered in the state.

At any time this type of association is used, for legal purposes, it is imperative that each person is aware of this arrangement and has been in contact with the reviewer, either in person, by telephone conversation, or by electronic message means. That is to say, each acknowledges the supervisory relationship between them, and there is some record in the file of this circumstance.

Thank you.

RSG:kcn

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Hurricane Policies and Procedures

Overview

Due to the volume of claims expected and the large geographic affected area, we will stage our Katrina Catastrophe teams from the three offices that surround New Orleans. The damage extends from Southeast, LA to Destin, FL and north to Jackson, MS. Lafayette is approximately 100 miles west of New Orleans. Jackson is approximately 200 miles due north. Pensacola is 200 miles east.

New Orleans staff has been relocated to New Orleans and Jackson to provide job intake, scheduling, engineering and administrative assistance to the branch offices. Of course we will need outside engineering help as well.

Administrative Staff and Marketing

Job Intake:

- Michelle Long (Louisiana), Candice Ditto (Jackson), Erica Richards (Pensacola) and Cynthia McDonald (Houston) will have primary responsibility for taking new Katrina assignment phone calls. Walter Reifel will take new Industrial Katrina assignments. However, each office will take the assignment and email the attachment to the appropriate office in an incomplete job sheet form. The person taking the assignment will input the information into the job sheet form and email it to Gwen Gaillot at gpg@rimkus.com for assignment
- We will get frequent requests for immediate inspections and quick report turnaround. Do not make commitments to the client regarding inspection or report delivery dates. If the assignment is contingent on immediate inspection, please immediately refer the call to Gary Bell, Walter Riefel or Ken Homfeld.

Job Assignment Numbers

- Assignment numbers will be assigned by Gwen Gaillot (New Orleans), Donna Runnebaum (Jackson), Erica Richards (Pensacola) or Andre Davis (Houston.)
- Job numbers will be assigned only when a completed job sheet is submitted. The office that issues the job number issues the confirmation and manages the file through completion including scheduling of inspection, transportation, hotel rooms, report processing, peer review, follow up inspections etc.

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Employee, Assignment and Hotel Scheduling

- Candice Ditto (Jackson), Kathie Blash (Lafayette) and Erica Richards (Pensacola) will handle all staffing, inspection and accommodations scheduling for their respective offices. Outside offices will handle these aspects scheduling jobs with outside office assignment numbers. Toni Palmer will maintain a complete database of all available accommodations for the Hurricane in Houston.

Assignment Scheduling

- Residential assignments will be scheduled by the assigning office. When practical, three geographically close assignments will be assigned per engineer per day. Large commercial and multidiscipline assignments will be scheduled by the project manager.
- Michelle Long, Candice Ditto, Erica Richards and Cynthia McDonald will have primary responsibility for taking new Katrina assignment phone calls. Walter Reifel will take new Industrial Katrina assignments. However, at times everyone will have to field new assignment phone calls.

Report Processing

- Report Processing will be performed by Kerry Campos (Louisiana), Heidi Tenorio (Mississippi) and Erica Richards (Pensacola). They will maintain the open file status, track inspections, report draft, peer review and report delivery. They will also handle status calls for their respective offices.
- Reports and invoices will be printed and mailed from the peer reviewing office.
 - Send draft reports to hatenorio@rimkus.com for peer reviews processing of Mississippi claims.
 - Send draft reports to khcampos@rimkus.com for peer review processing of Louisiana claims.
 - Send draft reports to erichards@rimkus.com for peer review processing of Florida claims.

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ENGINEERS, ARCHITECTS AND TECHNICAL PROFESSIONALS

Inspections

- We plan to schedule 3 inspections per engineer per day. You are expected to then return to your home office to draft the reports and submit for peer review within two weeks of assignment.
- Equipment available at local offices: 28' extension ladder, CompuLevel, flashlight, a 4' hand level, hammer with pry bar, ties downs and foam pad (for ladder transport.)
- Equipment you should bring: 25 foot tape, clipboard, gloves, graph paper, levels, hard hat, steel toe shoes, flashlight, cell phone, business cards.
- Inspections in Jefferson Parish also require an entrance pass which is available at each branch office or can be emailed to you.
- Rimkus shirts, jeans and work boots are acceptable inspection attire, but dress for safety on all assignments.
- Hep A and B shots are recommended by Government officials for recovery workers in New Orleans. Rimkus has a direct bill account with Concentra. Get your shots before arriving for inspection.
- Jackson, Lafayette and Pensacola offices will have ladders, storage space and copying, and printing available.

Reports

IT IS IMPERITIVE THAT WE ARE CONSISTENT IN OUR WIND VS. FLOOD DETERMINATIONS. PLEASE BE FAMILIAR WITH THE RIMKUS PROTOCOL FOR DIFFERENTIATING WIND DAMAGE FROM FLOOD DAMAGE.

- Our goal is a three week turnaround on residential Cat reports
- Residential Cat reports will utilize an abbreviated report format. Use the standard Intro and Conclusions style, but Discussion section should include an overview of inspection observations, brief and to the point. Examples will be provided.
- Draft reports are submitted to Kerry Campos (Louisiana), Heidi Tenorio (Mississippi) and Erica Richards (Pensacola) via email for peer review processing. They will track the assignments from intake through delivery.

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- The supporting peer review office will finalize all reports, as well as, bind and deliver the reports.

Pro Formas & Invoices

- Invoices will be mailed with cat reports except on extended assignments which will be mailed monthly. All CAT pro formas will be reviewed by the assigning manager.

Expenses

- Apartments, rental houses and hotels will be provided based on length of stay. Each will be furnished by Rimkus. If you have been indefinitely relocated by Rimkus to a hotel in lieu of a house or apartment, Rimkus will provide an additional IRS allowed \$36 per diem to cover the cost of meals.
- \$75 per diem will be allowed for each full day of traveling professionals in hotels only. This extra per diem is expected to cover additional traveling expenses including parking, cabs, food, drink, laundry, in room movies, incidentals, etc. Use you cell phone for long distance calls.
- Rental cars will be provided by Rimkus. Gasoline for rental cars will be reimbursed (attach receipts to Trip Report.) Personal vehicles will be billed as nonbillable mileage and reimbursed by Rimkus at 48.5 cents per mile. Rental of GPS direction systems are an approved expense.
- Exercise good judgment with onsite equipment purchases. Call if you are not sure.
- CAT expense reports should be submitted to Gary Bell or the Branch or Division Manager that assigned the job for approval and processing.

Miscellaneous

- Check email at <http://mail.rimkus.com/exchange>
- Post time at <http://webview.rimkus.com/webview>

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Contact Information:

Gary Bell can be reached by cell (281-857-1675) blackberry (glb@rimkus.com) Lafayette office (337-237-1511) or at my temporary residence (337-504-5930.)

Gwen Gaillot can be reached by cell (281-857-1628) blackberry
(gpg@rimkus.com) Lafayette office (337-237-1511)

Alternate line to Lafayette Office: 281-857-1670

Lafayette

LA QUINTA SUITES
1015 Pinhook Rd
Lafayette, LA 70503

Directions from N.O.: I-10 to Lafayette
Exit 103A US90/Lafayette
From Evangeline Thruway, turn R on Pinhook

Tel: 337-769-1790

Jackson:

Extended Stay Hotels
Studio Plus (10 Rooms)
800 Ridgewood Rd.
Ridgeland MS 39157

I-55 N to County Line Road
Left on Ridgewood

Contact: Lorenzo McGuire
Tel: 601-956-0884
Fax: 601-952-2172

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**Rimkus Consulting Group
2006 Hurricane Season
Project Execution Plan (PEP)**

Goals:

1. Increase market share of hurricane work.
2. Improve client relations
3. Increase profitability of hurricane work performed

Considerations:

- 1) Increase market share of hurricane work.
 - a) Provide brochure with highlights of PEP to clients
 - i) Increase visibility
 - ii) Show that we have learned from our mistakes
 - iii) Show that we are prepared for the work
 - iv) Show that we have learned from our mistakes in previous hurricanes
 - b) Follow up calls to decision makers and previous hurricane clients
- 2) Improve client relations.
 - a) Improve job request procedure by use of web based database
 - b) Improve visibility on status of job by use of web based database
 - i) Reduces calls to Rimkus
 - ii) Provides real status time data to clients
 - c) Establish a single point contact for each client
 - i) Improves relations by adding a name to the corporation
 - ii) Eliminates the client perception of a run around
 - iii) Limits interaction by upper level management
 - iv) Limits exposure of clients to contract employees
 - d) Improve turnaround of reports through preparation
 - i) Have corporate license for states
 - ii) Have experienced licensed reviewers registered in states
 - (1) Have licenses in place before hurricane season
 - (2) Experience should produce highest quality with quickest review
 - iii) Better quality drafts produced by contract employees
- 3) Increase profitability of work performed
 - a) Reduce duplication of effort
 - i) Rimkus Engineers
 - (1) Web Based Database allows tracking, sorting and self monitoring
 - (2) Quality report template
 - (3) Policies and procedures for direct employees
 - (a) Travel
 - (b) Per Diem
 - (c) Misc expectations
 - ii) Rimkus Admin
 - (1) Web Based Database allows tracking, sorting and monitoring
 - (2) Client access to database will reduce time spent looking up status etc.

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- (3) Database populates multiple fields
 - (a) Jobsheet
 - (b) Confirmation letter
 - (c) Tracking
 - (d) Potentially billing
- b) Utilize contract help
 - i) Engineers
 - (1) Identify small firms with capability and capacity
 - (2) Interview management
 - (3) Interview sample of proposed engineers
 - (4) Sign contractual agreement
 - (a) Non-compete clause
 - (b) Consider retainer
 - (5) Provide documentation for review prior to training
 - ii) Admin
 - (1) To help with initial data input
 - (2) To help with processing reports
- c) Pre Hurricane negotiations
 - i) Insurance companies
 - (1) Potential guaranteed contracts / percentage of their work
 - (2) Will they pay for surge database (similar to Jason Grover Katina database)
 - ii) National hotel chains for long term lodging of inspectors and point person
 - iii) Car rental agencies for long term leases of vehicles
 - (1) Can lease transfer between vehicles at multiple locations
 - (2) Have vehicles with gps system to help find locations in devastated areas
- d) As Hurricane unfolds
 - i) Establish a long term point person with significant authority to spend money and make decisions to stay near the site to manage engineers and resources
 - ii) Secure housing arrangements for point person and inspectors
 - iii) Have point person and 2 reviewers fly area
 - (1) Approximate devastation
 - (2) Determine resources required
 - (a) Engineers
 - (b) Admin
 - (c) Tools
 - (i) Vehicles
 - (ii) Cameras
 - (iii) Compulevels
 - (iv) Thermal Imagers
 - (v) Computers
 - (vi) Ladders
 - (vii) Fax

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- (viii) Printer
- (ix) Copier
- (x) Maps
- (3) Determine where to set up base location
 - (a) Office, Condo or Hotel
 - (b) Make sure communication links in place
 - (c) Office space for equipment storage
 - (d) Office space & office equipment for point person, admins and 2 additional resources TBD
- (4) Have reviewers make first round of site visits
 - (a) Gain familiarity with devastation in specific area
 - (b) Use knowledge of specific area and experience in subsequent reviews
 - (c) Use database sorting functions to give single reviewer all reviews in a geographic area
- (5) Train engineers and contract employees prior to sending to field
 - (a) Train on what information to gather at inspection
 - (b) Train on reports
 - (c) Train on data turnover
 - (d) Expand and use data developed by Paul Colman and Wes Jordan
 - (e) Policies and procedures for contract employees
 - (i) Travel
 - (ii) Per Diem
 - (iii) Misc expectations
- (6) Communicate with hurricane team

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